

Notice of Allowability

Application No.

10/813,211

Examiner

Jason Pinheiro

Applicant(s)

EIKA, TAKURO

Art Unit

3714

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendments filed 12/09/2008.
2. ☒ The allowed claim(s) is/are 1-4,6-9 and 11.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 20090520.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Dmitry Suhol/
Supervisory Patent Examiner, Art Unit 3714

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Stephan Pang on 05/19/2009.

The application has been amended as follows:

2. Replace claim 1 with the following:

A game apparatus for moving a moving object on a road in a virtual world, wherein line segments extend between the edges of the road and each of the line segments is divided into line segment regions, and for each neighboring pair of the line segments, the end points of the regions of the first line segment of the pair and the end points of the regions of the second line segment of the pair are connected sequentially from both the edges of the pair and the quadrilateral areas or triangular areas are formed, said game apparatus comprising:

an input reception unit which receives an operational input from a player;

a storage unit which stores a position and a velocity of the moving object and passage numbers, each of which represents a number of times the moving object passed through each of the regions;

a calculation unit which checks in which quadrilateral area or triangular area the moving object is included, estimates a passage number representing a number of times the moving object passed at the stored position of the moving object from the stored passage numbers of the one or two regions of the area including the moving object, and calculates an influence on the moving object based on the received operational input from the player, the stored position of the moving object, and the estimated passage number; and

an update unit which updates the stored position and the stored velocity of the moving object in accordance with the calculated influence, and increments the passage number that was stored of the region which is intersected by a line connecting the previous position and the updated position of the moving object, and

wherein, said calculation unit:

(a) estimates the passage number for each triangular area having one line segment region for which passage number L has been stored, as L ; and

(b) divides each quadrilateral area bounded by two line segment regions for one of which passage number M has been stored and for the other of which passage number N ($M < N$ where M is less than N) has been stored so that $N - M + 1$ number of small quadrilateral areas are arrayed in a row and one end of the row is defined by the line segment region with the stored passage number M and other end of the row is defined by the line segment region with the stored passage number N , and estimates respective passage numbers of the arrayed small quadrilateral areas, ranging from the stored passage number M to the stored passage number N , incrementing by 1 as $M, M+1, M+2, \dots, N-2, N-1, N$, respectively in order from one small quadrilateral area at said one end of the row to another small quadrilateral area at the other end of the row.

3. Replace claim 9 with the following:

A game method for a processing apparatus including an input reception unit, a calculation unit and an update unit for moving a moving object on a road in a virtual world, wherein line segments extend between the edges of the road and each of the line segments is divided into line segment regions, and for each neighboring pair of the line segments, the end points of the regions of the first line segment of the pair and the end points of the regions of the second line segment of the pair are connected sequentially from both the edges of the pair and quadrilateral areas or triangular areas are formed, by using a storage unit for storing a position and a velocity of the moving object passage numbers, each of which represents a number of times the moving object passed through each of the regions, said method comprising:

an input receiving step of receiving an operational input from a player on the input reception unit;

a calculating step performed by the calculation unit of checking in which quadrilateral area or triangular area the moving object is included, estimating a passage number representing a number of times the moving object passed at the stored position of the moving object from the stored passage numbers of the one or two regions of the area including the moving object, and calculating an influence on the moving object, based on the received operational input from the player, the stored position of the moving object, and the estimated passage number; and

an updating step performed by the updating unit of updating the stored position and the stored velocity of the moving object in accordance with the calculated influence and incrementing the stored passage number of the region which is intersected by a line connecting the previous position and the updated position of the moving object, and

wherein, ~~said calculation unit~~

(a) the passage number for each triangular area having one line segment region for which passage number L has been ~~stores~~ stored is estimated as L by the calculation unit; and

(b) each quadrilateral area bounded by two line segment regions for one of which passage number M has been stored and for the other of which passage number N ($M < N$ where M is less than N) has been stored is divided in the calculation unit so that $N - M + 1$ number of small quadrilateral areas are arrayed in a row and one end of the row is defined by the line segment region with the stored passage number M and other end of the row is defined by the line segment region with the stored passage number N, and estimates respective passage numbers of the arrayed small quadrilateral areas, ranging from the stored passage number M to the stored passage number N, incrementing by 1 as M, M+1, M+2..., N-2, N-1, N, respectively in order from one small quadrilateral area at said one end of the row to another small quadrilateral area at the other end of the row.

4. Replace claim 11 with the following:

A computer-readable information recording medium storing a program, in order to move a moving object on a road in a virtual world, wherein line segments extend between the edges of the road and each of the line segments is divided into line segment regions for each neighboring pair of the line segments, the end points of the regions of the first line segment of the pair and the end points of the regions of the second line segment of the pair are connected sequentially from both the edges of the pair and quadrilateral areas or triangular areas are formed, said program controlling a computer to function as:

an input reception unit which receives an operational input from a player;

a storage unit which stores a position and a velocity of a moving object and passage numbers, each of which represents a number of times the moving object passed through each of the regions;

a calculation unit which checks in which quadrilateral area or triangular area the moving object is included, estimates a passage number representing a number of times the moving object passed at the stored position of the moving object from the stored passage number of the one or two regions of the area including the moving object, and calculates an influence on the moving object based on the received operational input from the player, the stored position of the moving object, and the estimated passage number; and

an update unit which updates the stored position and the stored velocity of the moving object in accordance with the calculated influence, and increments the stored passage number of the region which is intersected by a line connecting the previous position and the updated position of the moving object, and

wherein, said calculation unit

(a) estimates the passage number for each triangular area having one line segment region for which passage number L has been stored, as L; and

(b) divides each quadrilateral area bounded by two line segment regions for one of which passage number M has been stored and for the other of which passage number N ($M < N$ where M is less than N) has been stored so that $N - M + 1$ number of small quadrilateral areas are arrayed in a row and one end of the row is defined by the line segment region with the stored passage number M and other end of the row is defined

by the line segment region with the stored passage number N , and estimates respective passage numbers of the arrayed small quadrilateral areas, ranging from the stored passage number M to the stored passage number N , incrementing by 1 as $M, M+1, M+2, \dots, N-2, N-1, N$, respectively in order from one small quadrilateral area at said one end of the row to another small quadrilateral area at the other end of the row.

Allowable Subject Matter

5. Claims 1-4, 6-9 and 11 are allowed.

REASONS FOR ALLOWANCE

6. The following is an examiner's statement of reasons for allowance: Claim 1 distinguishes over the prior art of record in that the Applicant specifically claims "wherein, a calculation unit estimates the passage number for each triangular area having one line segment region for which passage number L has been stored, as L ; and divides each quadrilateral area bounded by two line segment regions for one of which passage number M has been stored and for the other of which passage number N (where M is less than N) has been stored so that $N-M+1$ number of small quadrilateral areas are arrayed in a row and one end of the row is defined by the line segment region with the stored passage number M and other end of the row is defined by the line segment region with the stored passage number N , and estimates respective passage numbers of the arrayed small quadrilateral areas, ranging from the stored passage number M to the stored passage number N , incrementing by 1, respectively in order

from one small quadrilateral area at said one end of the row to another small quadrilateral area at the other end of the row, and uses this calculation to check which quadrilateral area or triangular area the moving object is in and update the stored position and stored velocity of the moving object". The teaching of the Applicant's claims are different from the prior art in that the prior art does not teach wherein, a calculation unit estimates the passage number for each triangular area having one line segment region for which passage number L has been stored, as L; and divides each quadrilateral area bounded by two line segment regions for one of which passage number M has been stored and for the other of which passage number N (where M is less than N) has been stored so that $N-M+1$ number of small quadrilateral areas are arrayed in a row and one end of the row is defined by the line segment region with the stored passage number M and other end of the row is defined by the line segment region with the stored passage number N, and estimates respective passage numbers of the arrayed small quadrilateral areas, ranging from the stored passage number M to the stored passage number N, incrementing by 1, respectively in order from one small quadrilateral area at said one end of the row to another small quadrilateral area at the other end of the row, and uses this calculation to check which quadrilateral area or triangular area the moving object is in and update the stored position and stored velocity of the moving object. Rather the prior art teaches the use of lap numbers to update the position and velocity of a moving object in accordance with a calculated influence.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Pinheiro whose telephone number is (571)270-1350. The examiner can normally be reached on M - F 8:00 AM - 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dmitry Suhol can be reached on (571) 272-4430. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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